

What is claimed is:

1. Daptomycin in crystalline form.
2. A lipopeptide in crystalline form wherein the lipopeptide is chosen from the group consisting of daptomycin and A-21978C analogs.
- 5 3. The crystalline lipopeptide of claim 2, wherein the crystals are needle-like, rod-like, needle cluster or urchin-like, flake-like, or plate-like.
4. The crystalline lipopeptide of claim 3, wherein the crystals are urchin-like or needle-like.
5. The crystalline lipopeptide of claim 2 having a purity of at least 95%.
- 10 6. The crystalline lipopeptide of claim 2 having a purity of at least 97%.
7. A pharmaceutical composition comprising the crystalline lipopeptide of claim 2 and a pharmaceutically acceptable carrier.
8. The pharmaceutical composition of claim 7, wherein the crystalline lipopeptide is daptomycin.
- 15 9. The pharmaceutical composition of claim 7, wherein the crystalline lipopeptide is enterically coated for oral administration.
10. The pharmaceutical composition of claim 7, which is in the form of micronized particles or microspheres.
11. A container comprising the pharmaceutical composition of claim 7.
- 20 12. A formulation comprising the crystalline lipopeptide of claim 2.
13. A container comprising the formulation of claim 12 and a physiologically acceptable buffer.

14. A composition of matter comprising the formulation of claim 12, selected from the group consisting of a pharmaceutical composition, a food composition, a feed composition, a veterinary composition, a cosmetic composition or a personal care composition.

15. The composition of matter of claim 14, wherein the composition is a personal care composition which is chosen from the group consisting of washing formulation, soap, shampoo, deodorant, perfume, cologne, or antiperspirant.

16. A method of preparing a crystalline form of a lipopeptide which comprises combining the lipopeptide with a crystallization solution comprising at least one cation and at least one alcohol chosen from the group consisting of polyhydric alcohols and low molecular weight alcohols and combinations thereof, wherein the lipopeptide is chosen from the group consisting of daptomycin and daptomycin analogs.

17. The method of claim 16, wherein the polyhydric alcohol is chosen from the group consisting of ethylene glycol, propylene glycol, glycerol, 1,2-propane diol, 2-methyl-2,4-pentanediol, 1,6-hexanediol, and 1,4-butanediol.

18. The method of claim 16, wherein the low molecular weight alcohol is chosen from the group consisting of methanol, isopropanol, tert-butanol, and n-propanol.

19. The method of claim 16, wherein the cation is a divalent cation.

20. The method of claim 19, wherein the divalent cation is chosen from the group consisting of manganese, magnesium, and calcium.

21. The method of claim 20, wherein the divalent cation is calcium.

22. The method of claim 16, wherein the crystallization solution consists of at least one salt and at least one low molecular weight alcohol.

23. The method of claim 16, wherein the crystallization solution further comprises one or more additional components chosen from the group consisting of organic precipitants, pH buffers, low molecular weight alcohols and detergents.

24. The method of claim 23 wherein the crystallization solution comprises as an organic precipitant polyethylene glycol.

25. A method for treating a disease caused by a gram-positive pathogen in a subject which comprises administering to the subject the pharmaceutical composition of claim 7 which comprises the crystalline lipopeptide in a therapeutically effective amount.

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26. The method of claim 25 wherein the disease is chosen from the group consisting of complicated skin and soft tissue infections, community-acquired pneumonia, complicated urinary tract infections, enteroccocal infections, endocarditis and bacteremia.

27. A method for administering to a subject in need thereof a crystalline lipopeptide or salt thereof, wherein the crystalline lipopeptide is chosen from the group consisting of crystalline daptomycin and crystalline A-21978C analogs, which comprises administering to the subject a pharmaceutical composition comprising the crystalline lipopeptide or salt thereof and a pharmaceutically acceptable carrier.

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28. The method of claim 27 wherein the crystalline lipopeptide or salt thereof is administered to the subject by pulmonary administration as a micronized particle.

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29. The method of claim 27 wherein the crystalline lipopeptide or salt thereof is administered to the subject as a sustained release form.

30. The method of claim 27 wherein the crystalline lipopeptide is administered orally.

31. The method of claim 27 wherein the crystalline lipopeptide is administered

20 subcutaneously.

32. The method of claim 27 wherein the crystalline lipopeptide is administered intravenously.

33. The method of claim 27 wherein the crystalline lipopeptide is administered intramuscularly.

34. A method of storing a lipopeptide selected from the group consisting of daptomyin and A-21978C analogs which comprises preparing the lipopeptide in crystalline form and storing the crystalline lipopeptide.

35. In a method for preparing a lipopeptide selected from the group consisting of daptomycin and A-21978C analogs the improvement which comprises preparing the lipopeptide in crystalline form.